



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** May 18, 2012

**In reply refer to:** H-12-7 through -12

The Honorable Anne S. Ferro  
Administrator  
Federal Motor Carrier Safety Administration  
Washington, D.C. 20590

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### Background

Motorcoach safety has received increased public attention as a result of several accidents in 2011. In the most serious accident, which occurred on March 12, 2011, in New York City, New York, a 1999 Prevost motorcoach, operated by World Wide Travel of Greater New York, was traveling along Interstate 95 when it departed the interstate to the right, crossed over an 11-foot shoulder, struck a roadside barrier, and rolled onto its side. The front of the vehicle subsequently collided with a support pole for an overhead bridge sign. Impact with the pole was directed through the vehicle's windshield, along the base of the passenger windows. The impact resulted in the vehicle's roof panel being detached from the bus body for almost the entire length of the bus.<sup>1</sup> Of the 33 occupants aboard the bus, 15 were fatally injured, and 18 received injuries ranging from serious to minor. World Wide Travel was operating a curbside service,<sup>2</sup> making 14 roundtrips daily.

Following this accident, the National Transportation Safety Board (NTSB) conducted an investigation of motorcoach safety with a focus on scheduled interstate curbside operations.<sup>3</sup> The objectives of this investigation were to (1) describe the characteristics of the curbside business model among interstate motorcoach operators; (2) describe the safety record of interstate motorcoach operators, including those that use a curbside business model; and (3) evaluate the adequacy of safety oversight for motorcoach operators using a scheduled curbside business model. The NTSB believes that improvements are needed in (1) mandatory reporting to the Federal Motor Carrier Safety Administration (FMCSA) by interstate passenger carriers, (2) methods used for passenger carrier safety comparisons, (3) methods for communicating to

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<sup>1</sup> This accident is still under investigation.

<sup>2</sup> Curbside service is a business model in which interstate motorcoach operators conduct scheduled trips from one city to another city or a destination and originate or terminate at a location other than a traditional bus terminal; most of these operations pick up or discharge passengers at one or more curbside locations (such as sidewalks or parking lots).

<sup>3</sup> For more information, see *Report on Curbside Motorcoach Safety*, Special Report NTSB/SR-11/01 (Washington, D.C.: National Transportation Safety Board, 2011) on the NTSB website at <http://www.nts.gov>.

consumers about interstate passenger carrier company safety, and (4) the interstate passenger carrier voluntary safety reporting process.

### **Interstate Passenger Carrier Mandatory Reporting to the FMCSA (MCS-150 Form)**

The FMCSA requires interstate passenger carriers to submit a standard form (MCS-150) when applying for a USDOT number as indicated in Title 49 *Code of Federal Regulations* (CFR) 390.19. The MCS-150 form includes relevant contact information (such as the company name, doing-business-as name, and address), information on the motor carrier's operational classification, number and types of vehicles operated, number of drivers, and miles traveled for all vehicles operated during the previous calendar year. The information on the MCS-150 form is used to calculate the accident and violation rates of passenger carriers. These rates are the primary basis for the determination of rankings in the Safety Measurement System (SMS) component of the Compliance, Safety, and Accountability (CSA) program.<sup>4</sup> The FMCSA requires that, once a USDOT number is assigned, the motor carrier update the MCS-150 form every two years.

During its development of the *Report on Curbside Motorcoach Safety*, the NTSB found the quality of the data obtained by the FMCSA from MCS-150 forms was poor. Of the 22,293 passenger carriers subject to FMCSA oversight, 7,102 (32%) had outdated MCS-150 data, and 2,783 (12%) had MCS-150 data on file with an undeterminable filing date.

The NTSB also evaluated reported mileage from MCS-150 forms and found that 9,809 (44%) of the 22,293 passenger carriers did not report mileage for their fleets for the previous calendar year. The lack of reliable annual mileage information on the MCS-150 forms for passenger carriers limits its usefulness in safety analyses. Specifically, the NTSB is concerned that the information reported by motor carriers on the FMCSA's MCS-150 form does not allow for the accurate comparison of safety risks based on miles traveled by passenger carriers. This problem is exacerbated by the fact that passenger carriers are only required to update their MCS-150 information every two years, but the mileage data is only required to be reported for the most recent calendar year. Additionally, the NTSB found that 2,557 (11%) of the motor carriers did not report the number of vehicles operated, and 1,316 (6%) did not provide the number of drivers. The NTSB concludes that the information reported by motor carriers on the FMCSA's MCS-150 is not reliable. Therefore, the NTSB recommends that the FMCSA revise the MCS-150 reporting requirements, as specified in 49 CFR 390.19, to require that motor carriers report fleet mileage, by year, for the two-year reporting period.

Further, although the FMCSA can cite passenger carriers for not updating the MCS-150 forms as required by 49 CFR 390.19, the NTSB found that FMCSA enforcement of reporting requirements was limited. Some FMCSA regions communicated with motor carriers that had not updated the MCS-150 forms every two years, as required, whereas other regions were less aggressive.<sup>5</sup> Of the 4,172 motorcoach operators studied in the *Report on Curbside Motorcoach Safety*

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<sup>4</sup> In December 2010, the FMCSA began the CSA program as its new oversight and enforcement system for commercial motor carriers. The SMS component of the CSA program is intended to identify individual carrier safety problems that can be targeted for correction.

<sup>5</sup> See NTSB/SR-11/01, p. 53.

that had experienced a roadside inspection, only 68 (2%) had been issued a violation for noncompliance with 49 CFR 390.19. The NTSB is concerned that the FMCSA does not have a consistent plan for enforcing reporting requirements. The NTSB concludes that, without enforcement, there is no incentive for motor carriers to report complete and accurate data as required by 49 CFR 390.19. Therefore, the NTSB recommends that the FMCSA develop and implement a plan for consistent, nationwide enforcement of the MCS-150 reporting requirements, as specified in 49 CFR 390.19, among interstate passenger carriers.

### **Interstate Passenger Carrier Safety Ranking and Reporting**

During its development of the *Report on Curbside Motorcoach Safety*, the NTSB found that the FMCSA evaluates passenger carrier safety performance based on how an individual motor carrier compares with similar-sized motor carriers.<sup>6</sup> The type of motor carrier operation (for example, passenger carrier, for-hire freight, or private carrier) is not directly considered in the comparison. The NTSB is concerned that this approach may not accurately measure the relative safety performance among passenger carriers. If systematic differences exist between freight carriers and passenger carriers in their patterns of unsafe driving practices and the crash indicator,<sup>7</sup> then these comparisons could result in inaccurate rankings of the safety risks posed by passenger carriers.

The NTSB first addressed this concern in 2004 when it issued a recommendation to the FMCSA in response to a June 23, 2002, motorcoach accident in Victor, New York.<sup>8</sup> The motorcoach ran off the highway at high speed, struck a guardrail, and rolled onto its side. Of the 48 occupants, 5 were killed, and 42 were injured (including the driver). Following the accident, the NTSB issued Safety Recommendation H-04-19, which asked the FMCSA to “revise the Safety Status Measurement System to compare passenger carriers to other passenger carriers to ensure accurate safety ratings.” The FMCSA responded by modifying the then-current Motor Carrier Safety Status Measurement System (SafeStat) with a new module that placed a higher priority on selecting passenger carriers for compliance reviews. On September 12, 2008, the FMCSA indicated that the new compliance monitoring prioritization module would result in timely attention to the passenger carriers that posed the highest safety risk. The NTSB classified Safety Recommendation H-04-19 “Closed—Acceptable Action” on August 12, 2009.

In December 2010, the FMCSA developed the CSA program, including SMS, which incorporates many changes to how the FMCSA assesses motor carriers, including an expanded list of safety issues categorized into seven Behavioral Analysis Safety Improvement Categories (BASICS).<sup>9</sup>

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<sup>6</sup> See NTSB/SR-11/01, p. 62.

<sup>7</sup> According to the FMCSA’s website, regarding the crash indicator, SMS evaluates a motor carrier’s crash history. Crash history is not specifically a behavior but is a consequence of a behavior and may indicate a problem with the carrier that warrants intervention. It is based on information from state-reported crash reports and identifies histories or patterns of high crash involvement, including frequency and severity. For more information, see <<http://ai.fmcsa.dot.gov/sms/InfoCenter/#question3>>.

<sup>8</sup> See *Motorcoach Run-off-the-Road and Rollover off Interstate 90, Victor, New York, June 23, 2002*, Highway Accident Report NTSB/HAR-04/03 (Washington, D.C.: National Transportation Safety Board, 2004) on the NTSB website at <<http://www.nts.gov>>.

<sup>9</sup> BASICS sort the carrier’s safety information into specific categories. The seven BASICS include unsafe driving, fatigued driving (hours of service), driver fitness, controlled substances and alcohol, vehicle maintenance, cargo-related, and crash indicator. For more information, see <<http://ai.fmcsa.dot.gov/sms/InfoCenter/#question3>>.

However, if these rankings do not identify which passenger carriers are failing to comply with safety rules, then the FMCSA cannot direct its resources appropriately. The NTSB is concerned that using pooled data from interstate passenger carriers and other types of motor carriers may not result in accurate assessments of passenger carrier safety performance risk. The NTSB concludes that the comparison grouping of nonpassenger carriers used by the FMCSA may not accurately measure the relative safety performance of passenger carriers. Therefore, the NTSB recommends that the FMCSA revise the SMS for passenger carrier risk assessment and ranking to include an analysis using only passenger carrier data, to ensure accurate and comparable safety rankings.

### **Passenger Carrier Consumer Information**

The FMCSA's website provides information regarding the safety performance of individual passenger carriers using data collected and ranked via the SMS. A consumer can look up individual interstate passenger carriers and determine their safety percentiles for five safety performance categories.<sup>10</sup> Additionally, the consumer can determine whether the motor carrier's safety ranking is satisfactory, conditional, or unsatisfactory.

During the development of its *Report on Curbside Motorcoach Safety*, the NTSB found that consumers may have difficulty determining a passenger carrier's safety record<sup>11</sup> because the safety performance information presented on the FMCSA's website is challenging to interpret. Percentiles are computed on a scale of 0 to 100 percent, with 100 percent indicating the worst performance and 0 percent indicating the best performance. This scale may be counterintuitive to the average user. Although the FMCSA explains its ranking system, consumers may misunderstand these explanations or may fail to read them. Moreover, the explanation of the ranking system is not easy for consumers to find and access.

Furthermore, values (in percentages) are provided for each of the five key aspects of safety performance, and consumers may not know how much weight to put on any one component, how to analyze the components, or how to use the information to determine the overall safety of a motor carrier. Compounding the potential confusion, the website does not permit direct comparisons of the relative safety of passenger carriers, which could help consumers choose the safest motor carriers for their needs.

The FMCSA recently improved consumer access to the safety record of passenger carriers through a new mobile application for Apple's iPhone and iPad called SaferBus. Using SaferBus, consumers can access the same information on a passenger carrier's safety record and operating authority as they can if they directly access the FMCSA website.

Other organizations and Federal agencies use safety ranking systems that are more intuitive and easier to use. For example, the National Highway Traffic Safety Administration (NHTSA) conducts passenger vehicle crash tests and rates vehicles using one to five stars, depending on their crash safety performance, with a five-star rating being the best.<sup>12</sup> These tests

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<sup>10</sup> The five safety performance categories are unsafe driving, fatigued driving, driver fitness, controlled substances and alcohol, and vehicle maintenance.

<sup>11</sup> See NTSB/SR-11/01, pp. 63–64.

<sup>12</sup> For more information, see NHTSA's website at <<http://www.safercar.gov/Safety+Ratings>>.

help consumers evaluate passenger vehicles based on their relative safety compared with similar vehicles, and manufacturers can then seek to add safety technology and improve crash test performance to earn higher safety ratings. This approach has also been adopted by the Insurance Institute for Highway Safety (IIHS), which has shown that performance in crash tests has improved markedly over time and that occupants in vehicles that perform better in crash tests have a lower fatality risk.<sup>13</sup> The IIHS rating system is Good (green), Acceptable (yellow), Marginal (orange), and Poor (red), which provides an intuitive and understandable ranking system for consumers.

The NTSB is concerned that the FMCSA's web-based information, unlike that of NHTSA and the IIHS, contains safety performance information that is difficult to interpret and understand. The NTSB concludes that it may be difficult for consumers to determine the safety record of passenger carriers by using FMCSA's information sources. Therefore, the NTSB recommends that the FMCSA revise the passenger carrier safety information posted on its website and SaferBus mobile application to assist consumers in interpreting safety information. The revisions should (1) address means to assist consumers in locating and interpreting information about passenger carrier safety, (2) enable consumers to compare the safety of two or more passenger carriers, (3) assist consumers in understanding the percentage safety ranking scales, and (4) incorporate easy-to-use ranking methods, such as quantitative star ratings.

### **The FMCSA Voluntary Safety and Consumer Complaint Reporting Program**

The FMCSA operates and maintains a voluntary safety reporting and consumer complaint system called the National Consumer Complaint Database (NCCDB).<sup>14</sup> Individuals can submit reports on safety violations, enforcement issues, household goods transportation consumer complaints, and other issues through the FMCSA website or via a toll-free telephone number. The toll-free number is also available through the SaferBus mobile application. Individuals who submit reports must provide their name, address, telephone number, and other contact information, and identify the motor carrier and the safety issue or consumer complaint. Once a safety report or complaint is voluntarily submitted and received, and the FMCSA considers it to be substantial,<sup>15</sup> the FMCSA will investigate the report or complaint, and the individual submitting the report will be notified of the findings resulting from the investigation. The FMCSA will not disclose the identity of individuals who submit reports unless required for the prosecution of a violation.

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<sup>13</sup> See C.M. Farmer and A.K. Lund, "Trends Over Time in the Risk of Driver Death: What if Vehicle Designs Had Not Improved?" *Traffic Injury Prevention*, vol. 7, no. 4 (2006), pp. 335–342; M.L. Brumelow and D.S. Zuby, "Impact and Injury Patterns in Frontal Crashes of Vehicles with Good Ratings for Frontal Crash Protection," *Proceedings of the 21st International Technical Conference on the Enhanced Safety of Vehicles* (Washington, D.C.: National Highway Traffic Safety Administration, 2009); C.M. Farmer, "Relationships of Frontal Offset Crash Test Results to Real-World Driver Fatality Rates," *Traffic Injury Prevention*, vol. 6, no. 1 (2005), pp. 31–37; and S.V. Newstead et al., "U.S. Consumer Crash Test Results and Injury Risk in Police-Reported Crashes," *Traffic Injury Prevention*, vol. 4, no. 2 (2003), pp. 113–127.

<sup>14</sup> For more information about the National Consumer Complaint Database, see the FMCSA's website at <http://nccdb.fmcsa.dot.gov/HomePage.asp>.

<sup>15</sup> According to 49 CFR 386.12(a), "A substantial violation is one which could reasonably lead to, or has resulted in, serious personal injury or death."

Although a broad variety of reports can be submitted, the FMCSA handles reports associated with household goods consumer (HHG) transportation complaints differently than other safety reports. The FMCSA uses HHG complaints, along with other safety data collected from inspections, to help prioritize the selection of HHG motor carriers for compliance reviews. The program is called the “Top 100 Household Goods Carriers List.” According to a memo by the FMCSA Associate Administrator for Enforcement, “the algorithm to compute this Top 100 HHG carriers list uses the violations reported by the public in the NCCDB as well as other attributable data, such as recordable crashes, carrier size, years in business, and operating authority.”<sup>16</sup> The FMCSA reported that, on average, 25% of the 5,000 HHG carriers operating in the United States received a consumer complaint. The number of HHG complaints indicates that consumers using these motor carriers are aware of and can find the FMCSA reporting system when they want to file a complaint.

The FMCSA appears to have successfully incorporated HHG transportation complaints into its oversight and enforcement activities. However, discussions held with FMCSA staff at national and local levels did not provide clear information on how or if voluntary safety reports concerning passenger carriers are used in passenger carrier safety efforts. FMCSA field investigators indicated that some of their passenger carrier voluntary safety reports came from passenger carrier drivers who would contact them directly via telephone with safety observations or issues, not from the NCCDB. It is clear that the reporting system for passenger carriers is not as well developed or integrated into passenger carrier oversight as that for HHG.

Voluntary and confidential safety reporting systems can provide a valuable source of supplemental information concerning individual passenger carrier safety. The NTSB is concerned that a majority of passenger carrier drivers, operators, and consumers may not be aware of the current FMCSA voluntary safety reporting system. The NTSB concludes that the FMCSA’s voluntary reporting system is not meeting its full potential as a supplemental source of passenger carrier safety information. Therefore, the NTSB recommends that the FMCSA evaluate (1) whether passenger carrier consumers, drivers, and operators can easily find and use the NCCDB and (2) whether additional advertising of the NCCDB and providing additional instructions on its use could ensure that passenger carrier consumers, drivers, and operators are aware of and able to use the NCCDB reporting system. The NTSB also recommends that the FMCSA develop and implement a system for incorporating information about passenger carriers, derived from the NCCDB, for use in prioritizing passenger carrier inspections.

Therefore, the National Transportation Safety Board makes the following recommendations to the Federal Motor Carrier Safety Administration:

Revise the MCS-150 reporting requirements, as specified in 49 *Code of Federal Regulations* 390.19, to require that motor carriers report fleet mileage, by year, for the 2-year reporting period. (H-12-7)

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<sup>16</sup> William A. Quade, FMCSA Associate Administrator for Enforcement and Program Delivery, memorandum (MC-ECC-0001-09) to the FMCSA managers and enforcement staff, June 5, 2009.

Develop and implement a plan for consistent, nationwide enforcement of the MCS-150 reporting requirements, as specified in 49 *Code of Federal Regulations* 390.19, among interstate passenger carriers. (H-12-8)

Revise the safety measurement system for passenger carrier risk assessment and ranking to include an analysis that uses only passenger carrier data for performance comparisons, to ensure accurate and comparable safety rankings. (H-12-9)

Revise the passenger carrier safety information posted on the Federal Motor Carrier Safety Administration website and SaferBus mobile application to assist consumers in interpreting safety information. The revisions should (1) address means to assist consumers in locating and interpreting information about passenger carrier safety, (2) enable consumers to compare the safety of two or more passenger carriers, (3) assist consumers in understanding the percentage safety ranking scales, and (4) incorporate easy-to-use ranking methods, such as quantitative star ratings. (H-12-10)

Evaluate (1) whether passenger carrier consumers, drivers, and operators can easily find and use the National Consumer Complaint Database (NCCDB) and (2) whether conducting additional advertising of the NCCDB and providing additional instructions on its use could ensure that passenger carrier consumers, drivers, and operators are aware of and able to use the NCCDB reporting system. (H-12-11)

Develop and implement a system for incorporating information about passenger carriers, derived from the National Consumer Complaint Database, for use in prioritizing passenger carrier inspections. (H-12-12)

In response to the recommendation in this letter, please refer to Safety Recommendations H-12-7 through -12. We encourage you to submit updates electronically at the following e-mail address: [correspondence@ntsb.gov](mailto:correspondence@ntsb.gov). If your response includes attachments that exceed 5 megabytes, please e-mail us at the same address for instructions. To avoid confusion, please do not submit both an electronic copy and a hard copy of the same response.

Chairman HERSMAN, Vice Chairman HART, and Members SUMWALT, ROSEKIND, and WEENER concurred in this recommendation.

*[Original Signed]*

By: Deborah A.P. Hersman  
Chairman